

BRIEF NOTE

INTESTINAL PARASITES OF THE BLUEGILL, *LEPOMIS MACROCHIRUS*, AND A SUMMARY OF THE PARASITES OF THE BLUEGILL FROM OHIO¹

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The common bluegill, *Lepomis macrochirus* (Rafinesque), is important as both a forage and game fish. Despite this, few studies have been conducted on the parasites of bluegills in Ohio (Bangham 1941, Christian 1972, Hare 1943, Krueger 1954). With these exceptions, bluegills have been neglected from a parasitological standpoint. Our study expands the present knowledge of bluegill parasites and provides a summary of all recorded bluegill parasites (in Ohio). The importance of knowing bluegill parasites is further increased when one considers the great economic significance their presence may have on fish impoundments, since bluegills are cultured in the numerous state, federal, and private ponds and reservoirs in Ohio.

We collected bluegills by Fyke net, seine, and electro-shocking from 5 bodies of water. The number collected from each site is as follows: Kokosing Reservoir (42), Knox County; Pleasant Hill Reservoir (31), Richland County; Ross Lake (46), Ross County; Delaware Wildlife Area, ponds 26 (27) and 48 (37), Delaware County.

All bluegills were collected during March and April 1979 and transported to the laboratory for routine necropsy. The intestinal tract of each fish was placed in an individual petri dish containing Ringer's cold solution. After opening the intestinal tract we searched for and removed all parasites. We observed them alive prior to fixation and preparation of whole mounts.

We recovered 9 different parasites (table 1). One trematode (*Posthodiplostomum minimum*), one cestode (*Proteocephalus ambloplitis*), two acanthocephalans (*Neoechinorhynchus cyclindratus* and *Leptorhynchoides thecatus*) and 5 nematodes (*Camallanus oxycephalus*, *Dichelyne cotylophora*, *Spinitectus gracilis*, *Spinitectus micracanthus*, and *Spiroxys contorta*). Of the 9 parasites, 3 (*Spiroxys contorta*, *Dichelyne cotylophora*, and *Spinitectus gracilis*) had not previously been recorded from Ohio's inland waters.

The greatest parasite diversity appeared in fish taken from the 3 largest and oldest bodies of water: Kokosing Reservoir, Ross Lake, and Pleasant Hill Reservoir (table 2). The prevalence as well as the intensity of infection was lowest among *Dichelyne cotylophora*, *Spiroxys contorta*, and *Leptorhynchoides thecatus* (table 1).

A summary of the parasites found in Ohio bluegills (table 2) shows a total of 21 and includes: 8 trematodes, 2 cestodes, 2 acanthocephalans, 7 nematodes, and 2 copepods.

Numerous studies of bluegill parasites have been reported and the checklist of bluegill parasites exceeds 110 in North America alone (Hoffman 1967). This number far exceeds the summary total of 21 found in Ohio bluegills (table 2) and serves as an indicator of the small emphasis placed on parasites of bluegills in Ohio. Bluegills function as intermediate hosts in several life cycles such as *Proteocephalus ambloplitis*, *Posthodiplostomum minimum*, and *Spiroxys contorta* (table 2) and may be important in the parasitism of other animals.

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TABLE 1

Prevalence (%) of parasites in *Lepomis macrochirus* from 5 inland bodies of water in Ohio.

Parasite	Kokosing Reservoir	Ross Lake	Pleasant Hill Reservoir	Delaware Wildlife Area—Pond #26	Delaware Wildlife Area—Pond #48
<i>Posthodiplostomum minimum</i>	83.3	65.2	54.8	44.4	91.9
<i>Proteocephalus ambloplitis</i>	64.3	84.8	12.9	7.4	0.0
<i>Camallanus oxycephalus</i>	11.9	13.0	6.4	14.8	18.9
<i>Dichelyne cotylophora</i>	9.5	4.3	3.2	0.0	8.1
<i>Spinitectus micracanthus</i>	54.8	0.0	67.7	100.0	100.0
<i>Spinitectus gracilis</i>	0.0	100.0	0.0	0.0	0.0
<i>Spiroxys contorta</i>	2.4	6.5	3.2	0.0	0.0
<i>Neoechinorhynchus cylindratus</i>	0.0	15.2	6.4	0.0	0.0
<i>Leptorhynchoides thecatus</i>	9.5	4.3	0.0	0.0	0.0

TABLE 2

Summary of bluegill parasites from Ohio waters.

Trematoda	
<i>Gyrodactylidae</i>	Bangham (1941)
<i>Onchocleidus mucronatus</i>	Krueger (1954)
<i>Onchocleidus perdis</i>	Krueger (1954)
<i>Haploleidus furcatus</i>	Krueger (1954)
<i>Crepidostomum cornutum</i>	Krueger (1954)
* <i>Posthodiplostomum minimum</i>	Krueger (1954); our study (1979)
* <i>Neascus vanclavii</i>	Bangham (1941); Hare (1943)
* <i>Neacus</i> sp.	Bangham (1941)
Cestoda	
* <i>Hymenolepis</i> sp.	Krueger (1954)
* <i>Proteocephalus ambloplitis</i>	Bangham (1941); Hare (1943); our study (1979)
Acanthocephala	
<i>Leptorhynchoides thecatus</i>	Bangham (1941); Hare (1943); our study (1979)
<i>Neoechinorhynchus cylindratus</i>	Bangham (1941); our study (1979)
Nematoda	
* <i>Agamonema</i> sp.	Bangham (1941)
<i>Camallanus oxycephalus</i>	Bangham (1941); our study (1979)
* <i>Spiroxys contorta</i>	our study (1979)
* <i>Dichelyne cotylophora</i>	our study (1979)
<i>Spinitectus carolini</i>	Krueger (1954); Bangham (1941)
<i>Spinitectus gracilis</i>	our study (1979)
<i>Spinitectus micracanthus</i>	Christian (1972); our study (1979)
Copepoda	
<i>Ergasilus centrarchidarum</i>	Bangham (1941)
<i>Ergasilus caeruleus</i>	Bangham (1941)

*Larval stages.

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